PCIA Personal Communications Industry Association

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

VIA COURIER

May 21, 1998

Magalie Roman Salas, Esq.
Secretary
Federal Communications Commission
1919 M Street, NW Room 200
Washington, DC 20554

RE: *Ex parte* notification:
➤ *CC Docket No. 97-213, Communications Assistance for Law Enforcement Act.*

Dear Ms. Salas:

On Wednesday, May 20, 1998, I met with David Wye, Senior Adviser for Technology and Spectrum Policy in the Wireless Telecommunications Bureau to discuss the above referenced docket.

In addition to discussing the status of the referenced proceeding, in the course of the meeting, I informed Mr. Wye about PCIA's efforts to develop a final standard for traditional one way paging services. Copies of that standard and related draft materials are attached.

Pursuant to §1.1206(b) of the Commission's rules, two copies of this letter are hereby filed with the Secretary's office and a copy of this filing without attachments is being sent today to Mr. Wye.

Kindly refer questions in connection with this matter to me at 703-739-0300.

Sincerely,

Robert L. Hoggarth
Senior Vice President, Paging & Messaging

Attachments (2)
cc: David Wye

No. of Copies rec'd 0+1
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CALEA Suite of Standards

for

Traditional Paging

Advanced Messaging, and

Ancillary Services

Version 1.0

PCIA Technical Committee

CALEA Subcommittee

04 May, 1998

Chairs:

CALEA Subcommittee: David I. Odom, DOdom@conxus.com (CONXUS Communications, Inc.)
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Foreword

In this suite of documents, the Personal Communications Industry Association (PCIA) Technical Committee defines the specifications for interface compatibility requirements between paging service providers (PSPs) and law enforcement agencies (LEAs).

The Communications Assistance for Law Enforcement Act (CALEA)[1] was enacted on October 25, 1994. CALEA requires telecommunications carriers to ensure that their equipment, facilities, or services have the capability to:

(1) "expeditiously ... isolate and enable the government to intercept all communications in the carrier's control to or from the equipment facilities or services of a subscribe[r], concurrently with the communications' transmission, or at any later time acceptable to the government;"

(2) "expeditiously ... isolate and enable the government to access reasonably available call identifying information about the origin and destination of communications;"

(3) "make intercepted communications and call identifying information available to government in a format available to the carrier so they may be transmitted over lines or facilities leased or procured by law enforcement to a location away from the carrier's premises;" and

(4) "meet these requirements with a minimum of interference with the subscriber's services and in such a way that protects the privacy of communications and call identifying information that are not targeted buy [sic] electronic surveillance orders, and that maintains the confidentiality of the government's wiretaps."[2]

Under CALEA, industry associations and standards-setting bodies are authorized to adopt standards for satisfying these assistance capability requirements. Telecommunications carriers, manufacturers, and/or support service providers that comply with these standards have "safe harbor" and are deemed in compliance with CALEA's capability requirements:

> "a telecommunications carrier shall be found to be in compliance with the assistance capability requirements under section 103, and a manufacturer of telecommunications transmission or switching equipment or a provider of telecommunications support services shall be found in compliance with section 106, if the carrier, manufacturer, or support service provider is in compliance with publicly available technical requirements or standards adopted by an industry association or standard-setting organization. ..."[3]

1 Communications Assistance for Law Enforcement Act, Pub. L. No 103-414 (CALEA).

2 Telecommunications Carrier Assistance to the Government, H. Rep. No. 103-827, at 22 (October 4, 1994).

3 CALEA, § 107.

In November 1997, an Interim Standard (J-STD-025) for wireline and wireless telephony[4] was adopted by the Telecommunications Industry Association Subcommittee TR45.2 and Committee T1 of the Alliance for Telecommunications Industry Solutions. Shortly thereafter, in December 1997, a working group was established under the auspices of PCIA to determine whether J-STD-025 was readily applicable to paging technology and, if not, to develop a separate standard for the paging industry. After carefully reviewing J-STD-025, the working group determined that J-STD-025's telephony specifications were not readily applicable to paging technology and that a separate standard was necessary.

In order to expedite the standards-setting process, the Paging Technical Committee decided to develop a Suite of Standards and release this Suite of Standards in three parts: 1) Traditional Paging, 2) Advanced Messaging, and 3) Ancillary Services. The Traditional Paging Standard defines compliance for one-way paging services with fixed geographic coverage areas. The Advanced Messaging Standard defines compliance for subscriber defined on-demand roaming, forwarding and redirection, two-way and acknowledged voice paging, and real-time wireless packet data services. The Ancillary Services Standard defines compliance for caller/subscriber bridging, outdial, and other real-time bridged audio services. Any PSP, manufacturer, or service provider that complies with these Standards will have "safe harbor" under section 107 of CALEA and will be found in compliance with CALEA's assistance capability requirements.

[4] Lawfully Authorized Electronic Surveillance, TIA/ATIS, Interim/Trial Use Standard (J-STD-025)

Document Change Record

v1.0 04 May, 1998 First release of document.

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Table of Standards

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Introduction

In this suite of documents, the PCIATechnical Committee defines the specifications for interface compatibility requirements between PSPs and LEAs.

In November 1997, an Interim Standard (J-STD-025) for wireline and wireless telephony was adopted by the Telecommunications Industry Association Subcommittee TR45.2 and Committee T1 of the Alliance for Telecommunications Industry Solutions. Shortly thereafter, in December 1997, a working group was established under the auspices of PCIA to determine whether J-STD-025 was readily applicable to paging technology and, if not, to develop a separate standard for the paging industry. After carefully reviewing J-STD-025, the working group determined that J-STD-025's telephony specifications were not readily applicable to paging technology and that a separate standard was necessary.

In order to expedite the standards-setting process, the Paging Technical Committee decided to develop a Suite of Standards and release this Suite of Standards in three parts: 1) Traditional Paging, 2) Advanced Messaging, and 3) Ancillary Services. Any PSP, manufacturer, or service provider that complies with these Standards will have "safe harbor" under section 107 of CALEA and will be found in compliance with CALEA's assistance capability requirements.

In some instances, the paging services to which certain intercept subjects subscribe may permit a PSP to access and deliver communications and reasonably available call-identifying information without the PSP having to modify its networks or systems. In these instances, the PSP may be fully compliant with the assistance capability requirements set forth in CALEA. For example, an LEA could effect a central office- or local loop-based interception using conventional methods of access and delivery without the involvement of the PSP. Another example is the PSP could assist the LEA in setting up a clone or duplicate of the subject's receiving device so that the LEA could monitor the subject's call content through the radio channel transmissions.

Purpose

In this suite of documents, the PCIATechnical Committee defines the specifications for interface compatibility requirements between PSPs and LEAs.

Any PSP, manufacturer, or service provider that complies with this Suite of Standards will have "safe harbor" under section 107 of CALEA and will be found in compliance with CALEA's assistance capability requirements.

Scope

The scope of this Suite of Standards is to define the services to support LAES and the interface between a PSP and an LEA.

How This Suite of Standards Document is Organized

This Suite of Standards is organized around the three separate areas of Paging-related communications: 1) Traditional Paging, 2) Advanced Messaging, and 3) Ancillary Services. The sections addressing each of these are:

Foreword provides an overview of this Suite of Standards.

Document Change Record provides revision control for this Suite of Standards.

Introduction defines the purpose, scope, and organization of this Suite of Standards.

References defines a list of the references used in the preparation of this Suite of Standards.

Glossary defines the words, acronyms, and initialisms that are used in this Suite of Standards.

Standard 1 CALEA Specification for Traditional Paging defines the Traditional Paging LAES services, network entities, and information flows to implement Traditional Paging LAES services.

Standard 2 CALEA Specification for Advanced Messaging defines the Advanced Paging and Packet Data LAES services, network entities, and information flows to implement Advanced Messaging LAES services.

Standard 3 CALEA Specification for Ancillary Services defines the Ancillary Services LAES services, network entities, and information flows to implement Ancillary Services LAES services.

References

Communications Assistance for Law Enforcement Act, Pub. L. No. 103-414

Telecommunications Carrier Assistance to the Government, H. Rep. No. 103-827

Lawfully Authorized Electronic Surveillance, TIA/ATIS, Interim/Trial Use Standard (J-STD-025)

Glossary

Note: Definitions may vary in each of the referenced PCIA CALEA Standards documents.

Advanced Messaging
to be defined as part of the Advanced Messaging standards generation process.

Ancillary Services
to be defined as part of the Ancillary Services standards generation process.

CALEA
Communications Assistance for Law Enforcement Act.

call content
see *content*.

call-identifying information
is defined in CALEA Section 102 (2) to be "dialing or signaling information that identifies the origin, direction, destination, or termination of each communication generated or received by a subscriber by means of any equipment, facility, or service of a [PSP]."

clone radio receiving device
a radio receiving device, provided by the LEA, that is pre-programmed by the PSP as authorized by a lawful authorization with the intercept subject's radio receiving address and set to monitor the subject's radio receiving frequency with the express purpose of decoding and capturing the subject's call content when used within the subject's fixed geographical broadcast area. A clone radio receiving device has the same characteristics and call content reception and processing features as the intercept subject's radio receiving device.

Commission
defined in CALEA Section 102 (3) to be "the Federal Communications Commission".

communication
in this Standard, communication refers to any wire or electronic communication, as defined in 18 USC 2510.

content
is defined in 18 USC 2510 (8) to be "when used with respect to any wire or electronic communications, includes any information concerning the substance, purport, or meaning of that communication."

electronic surveillance
the statutory-based legal authorization, process, and associated technical capabilities and activities of LEAs related to the interception of wire, oral, or electronic communications while in transmission.

government
defined in CALEA Section 102 (5) to be "the government of the United States and any agency or instrumentality thereof, the District of Columbia, any commonwealth, territory, or possession of the United States, and any State or political subdivision thereof authorized by law to conduct electronic surveillance."

intercept
defined in 18 USC 2510 (4) to be "the aural or other acquisition of the content of any wire, electronic, or oral communication through the use of any electronic, mechanical, or other device."

LAES
Lawfully Authorized Electronic Surveillance

Law Enforcement Agency
a government entity with the legal authority to conduct electronic surveillance.

Lawful Authorization
no intercepts shall take place without specific lawful authorization. One Lawful Authorization may encompass multiple devices and/or multiple geographic locations.

LEA
see *Law Enforcement Agency.*

paging service provider[5]
defined from CALEA Section 102 (8) to be, "a person or entity engaged in the transmission or switching of wire or electronic communications as a common carrier for hire, and includes 1) a person or entity engaged in providing commercial mobile service, or 2) a person or entity engaged in providing wire or electronic communications switching or transmission service to the extent that the Commission finds such service is a replacement for a substantial portion of local telephone exchange service and that it is in the public interest to deem such a person or entity to be a [PSP] for purposes of this title. This does not include 1) persons or entities insofar as they are engaged in providing information services, and 2) any class or category of [PSPs] that the Commission exempts by rule after consultation with the U. S. Attorney General."

PSP
see *Paging service provider.*

Traditional Paging
traditional paging supports the one-way wireless transmission of tone-only, numeric, alphanumeric, and voice messages from a PSP to one or more radio receiving devices within a stipulated, predefined geographic radio coverage area of the PSP's infrastructure.

transmission
the act of transferring communications from one location or another by wire, radio, electromagnetic, photoelectronic, or photo-optical system.

USC
United States Code.

wire communications
defined in 18, USC 2510 (1) to be "any aural transfer made in whole or in part through the use of facilities for the transmission of communications by the aid of wire, cable, or other like connection between the point of origin and the point of reception (including the use of such connection in a switching station) furnished or operated by any person engaged in providing or operating such facilities for the transmission of interstate or foreign communications or communications affecting interstate or foreign commerce and such term includes any electronic storage of such communication."

[5] This Suite of Standards uses the term *paging service provider* instead of the CALEA term *telecommunication carrier.*

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Standard 1

CALEA Specification for Traditional Paging

Version 1.0

PCIA Technical Committee
CALEA Subcommittee

04 May, 1998

Chairs:

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Document Status:

1.0 First publication (980504)

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Foreword

In this document, the Personal Communications Industry Association (PCIA) Technical Committee defines the specifications for interface compatibility requirements between paging service providers (PSPs) and law enforcement agencies (LEAs) for Traditional Paging.

Traditional Paging supports the one-way wireless transmission of tone-only, numeric, alphanumeric, and voice messages from a PSP to one or more radio receiving devices within a stipulated, predefined geographic radio coverage area of the PSP's infrastructure. Growing in popularity over the last thirty years, today traditional paging is the service of choice for more than 95% of the more than 40 million subscribers to radio paging services.[1]

The Communications Assistance for Law Enforcement Act (CALEA)[2] was enacted on October 25, 1994. CALEA requires telecommunications carriers to ensure that their equipment, facilities, or services have the capability to:

(1) "expeditiously ... isolate and enable the government to intercept all communications in the carrier's control to or from the equipment facilities or services of a subscribe[r], concurrently with the communications' transmission, or at any later time acceptable to the government;"

(2) "expeditiously ... isolate and enable the government to access reasonably available call identifying information about the origin and destination of communications;"

(3) "make intercepted communications and call identifying information available to government in a format available to the carrier so they may be transmitted over lines or facilities leased or procured by law enforcement to a location away from the carrier's premises;" and

(4) "meet these requirements with a minimum of interference with the subscriber's services and in such a way that protects the privacy of communications and call identifying information that are not targeted buy [sic] electronic surveillance orders, and that maintains the confidentiality of the government's wiretaps."[3]

Under CALEA, industry associations and standards-setting bodies are authorized to adopt standards for satisfying these assistance capability requirements. Telecommunications carriers, manufacturers, and/or support service providers that comply with these standards have "safe harbor" and are deemed in compliance with CALEA's capability requirements:

> "a telecommunications carrier shall be found to be in compliance with the assistance capability requirements under section 103, and a manufacturer of telecommunications transmission or switching equipment or a provider of telecommunications support services shall be found in compliance with section 106, if the carrier, manufacturer, or support service provider is in compliance with publicly available technical requirements or standards adopted by an industry association or standard-setting organization. ..."[4]

1 Based on list of top 29 Paging Carriers published by RCR on October 27, 1997.

2 Communications Assistance for Law Enforcement Act, Pub. L. No 103-414 (CALEA).

3 Telecommunications Carrier Assistance to the Government, H. Rep. No. 103-827, at 22 (October 4, 1994).

4 CALEA, § 107.

In November 1997, an Interim Standard (J-STD-025) for wireline and wireless telephony[5] was adopted by the Telecommunications Industry Association Subcommittee TR45.2 and Committee T1 of the Alliance for Telecommunications Industry Solutions. Shortly thereafter, in December 1997, a working group was established under the auspices of PCIA to determine whether J-STD-025 was readily applicable to paging technology and, if not, to develop a separate standard for the paging industry. After carefully reviewing J-STD-025, the working group determined that J-STD-025's telephony specifications were not readily applicable to paging technology and that a separate standard was necessary.

In order to expedite the standards-setting process, the Paging Technical Committee decided to develop a Suite of Standards and release this Suite of Standards in three parts. This part deals with Traditional Paging. Any PSP, manufacturer, or service provider that complies with this Standard will have "safe harbor" under section 107 of CALEA and will be found in compliance with CALEA's assistance capability requirements.

[5] Lawfully Authorized Electronic Surveillance, TIA/ATIS, Interim/Trial Use Standard (J-STD-025)

Table of Contents

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1. Introduction

In this document, the PCIATechnical Committee defines the specifications for interface compatibility requirements between PSPs and LEAs for Traditional Paging.

Traditional Paging supports the one-way wireless transmission of tone-only, numeric, alphanumeric, and voice messages from a PSP to one or more radio receiving devices within a stipulated, predefined geographic radio coverage area of the PSP's infrastructure. Growing in popularity over the last thirty years, today traditional paging is the service of choice for more than 95% of the more than 40 million subscribers to radio paging services.[6]

1.1 Purpose

In this document, the PCIATechnical Committee defines the specifications for interface compatibility requirements between PSPs and LEAs for Traditional Paging.

Any PSP, manufacturer, or service provider that complies with this Standard will have "safe harbor" under section 107 of CALEA and will be found in compliance with CALEA's assistance capability requirements.

1.2 Scope

The scope of this Standard is to define the services to support LAES and the interface between a PSP and an LEA for Traditional Paging.

[6] Based on list of top 29 Paging Carriers published by RCR on October 27, 1997.

1.3 How This Document is Organized

This Standard is organized as follows:

Foreword provides an overview of this document.

Document Change Record provides revision control for this document.

Section 1 Introduction defines the purpose, scope, and organization of this document.

Section 2 Features and Services Overview defines the means to access communications through the means of cloned radio receiving devices.

Section 3 Assumptions identifies this Standard's assumptions related to call content and reasonably available call-identifying information.

Section 4 Network Reference Model identifies the set of functional entities and actions for the intercept process.

Section 5 Call Content and Reasonably Available Call-Identifying Information Delivery defines the delivery of call content and reasonably available call-identifying information

Section 6 Call Content and Reasonably Available Call-Identifying Information Surveillance Service Description describes the use of the clone radio receiving device.

References defines a list of the references used in the preparation of this Standard.

Glossary defines the words, acronyms, and initialisms that are used in this Standard.

2. Features and Services Overview

This Standard defines the means to access communications as an intercept access service through the use of clone radio receiving devices. The services fall into two categories:

content surveillance services to provide access to an intercept subject's communications, and

call associated services to provide reasonably available call-identifying information about calls involving the intercept subject(s).

The use of the clone radio receiving device technique satisfies requirements for surveillance of traffic to traditional paging radio receiving devices by furnishing a "duplicate" radio receiving device configured to receive all messages transmitted to the intercept subject's radio receiving device address(es) (commonly called cap-code(s)) identified in the lawful authorization.

Clone radio receiving devices offer a number of distinct advantages which are difficult, if not impossible, to emulate using any alternative technique(s):

Availability Clone radio receiving devices can be provided today, without special engineering,

Bandwidth Virtually no limit exists with regards to the number of simultaneously monitored intercept subjects,

Multi-LEA Virtually no limit exists with regards to the number of LEAs able to simultaneously monitor any specific intercept subject,

Mobility Clone radio receiving devices can be carried to the most desirable location, or to multiple locations, from other law enforcement monitoring locations, within the intercept subject's predefined geographical coverage area,

Discretion Clone radio receiving devices are inherently 'invisible' to both the intercept subject and the PSP's staff, and

Effective Clone radio receiving devices provide surveillance on all calls regardless of the origin (e.g., PSTN, Internet, etc.).

3. Assumptions

Traditional paging LAES capabilities allow a PSP to deliver the intercepted call content (e.g., tone-only, voice, numeric, and alphanumeric paging) and reasonably available call-identifying information to an authorized LEA using the intercept subject's radio transmission channel and geographic coverage area.

Call Content: Although not defined in CALEA, "content" is defined in 18 USC 2510 (8) to be "when used with respect to any wire or electronic communications, includes any information concerning the substance, purport, or meaning of that communication." As interpreted by this Standard for traditional paging, call content covers tone-only, numeric, alphanumeric, and voice messages provided over the radio transmission channel to the intercept subject's radio receiving device.

Call-identifying information: is defined in CALEA Section 102 (2) to be "dialing or signaling information that identifies the origin, direction, destination, or termination of each communication generated or received by a subscriber by means of any equipment, facility, or service of a [PSP]." As interpreted by this Standard for traditional paging: *destination* is the radio receiving device address to which a call is being made (e.g., called party); *direction* is the outbound transmission path from the PSP to the radio receiving device; *origin* is the number of the party initiating a call (e.g., calling party); and *termination* is the entry to the transmission path from the PSP to the radio receiving device.

For traditional paging, reasonably available call-identifying information is limited to the subject's radio receiving device address that is available through monitoring the radio transmission channel. The call origin is not reasonably available in most PSP installations but may be obtained through the originating service provider (e.g., EC, ISP).

4. Network Reference Model

The intercept process consists of a set of functional entities and the actions between the functional entities. The functional entities (PSP Administration, LEA Administration, PSP Infrastructure, and Messaging Input) provide the functions of the system and actions (Authorization, Provision, and Delivery) provide the communication of information between the functional entities. These actions and functional entities are discussed without regard to their implementation. The relationships between these actions and functional entities are shown in Figure 1.

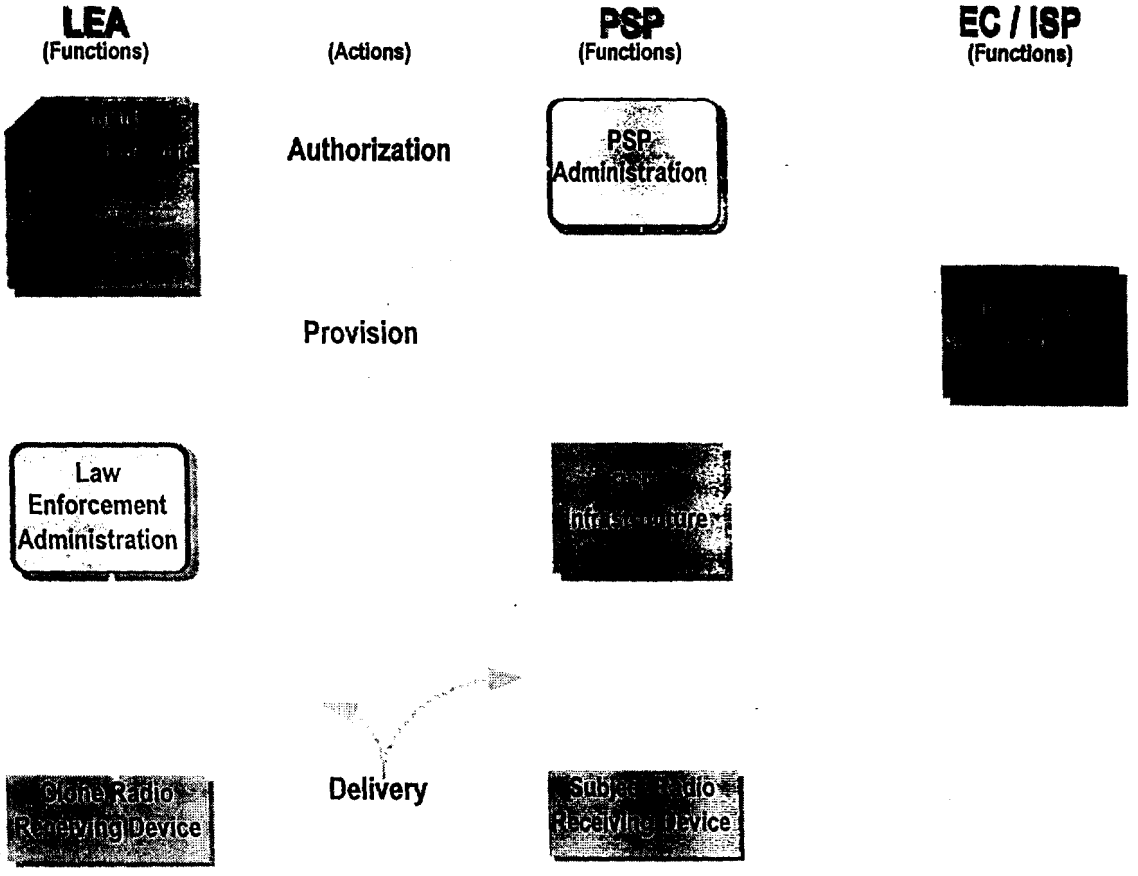

Figure 1: Traditional Paging Intercept Model

The **Lawful Authorization** is an important part of the LAES. No intercepts shall take place without specific lawful authorization. One Lawful Authorization may encompass multiple devices and/or multiple geographic locations.

4.1 Lawful Authorization Action

The Lawful Authorization Action is the serving of the Lawful Authorization to the PSP by the LEA.